

IN THE CLAIMS:

1 1. (Currently Amended) A method of operating a switch for frames in a computer net-
2 work, comprising:

3 receiving a frame (the received frame) at a port of said switch, said received
4 frame containing one or more indicia of frame type designation;

5 deriving a virtual local area network (derived VLAN) value in response to said
6 one or more indicia of frame type designation, said derived VLAN internal to said
7 switch;

8 accessing a forwarding data base with said derived VLAN value to determine a
9 destination address; and,

10 forwarding, in response to said derived VLAN value, said received frame to an
11 output port for transmission to the destination.

1 2. (Original) The method of claim 1 further comprising, said forwarding step forwarding
2 in response to said derived VLAN value and said destination.

1 3. (Original) The method of claim 1 wherein said indicia of frame type designation fur-
2 ther comprises:

3 a protocol type.

1 4. (Original) The method of claim 1 wherein said indicia of frame type designation fur-
2 ther comprises:

3 a subnet value.

1 5. (Original) The method of claim 1 wherein said indicia of frame type designation fur-
2 ther comprises:

3 a virtual local area network established in said computer network.

1 6. (Original) The method of claim 1 wherein said indicia of frame type designation fur-
2 ther comprises: an IP source address.

1 7. (Original) The method of claim 1 wherein said indicia of frame type designation fur-
2 ther comprises:

3 an index value associated with a port at which said received frame was received.

1 8. (Original) The method of claim 1 further comprising:

2 deriving a MAC address from said derived VLAN value and forwarding said re-
3 ceived frame to a port for transmission to a destination having said MAC address.

1 9. (Currently Amended) A switch to forward frames in a computer network, comprising:

2 a port to receive a frame (the received frame), said received frame containing one
3 or more indicia of frame type designation;

4 a parsing engine to derive a virtual local area network (derived VLAN) value in
5 response to said one or more indicia of frame type designation, said derived VLAN inter-
6 nal to said switch;

7 a forwarding data base having said derived VLAN value as input and a destina-
8 tion address as output; and,

9 an output port to transmit said received frame, in response to said derived VLAN
10 value, for transmission to said destination address.

1 10. (Original) The apparatus as in claim 9 further comprising:

2 a forwarding engine for forwarding said received frame in response to said de-
3 rived VLAN value and said destination address.

1 11. (Currently Amended) A computer readable media containing instructions for the
2 practice of ~~the method of claim 1~~ operating a switch for frames in a computer network,
3 comprising:

4 receiving a frame (the received frame) at a port of said switch, said received
5 frame containing one or more indicia of frame type designation;

6 deriving a virtual local area network (derived VLAN) value in response to said
7 one or more indicia of frame type designation, said derived VLAN internal to said
8 switch;

9 accessing a forwarding data base with said derived VLAN value to determine a
10 destination address; and,

11 forwarding, in response to said derived VLAN value, said received frame to an output
12 port for transmission to the destination.

1 12. (Currently Amended) Electromagnetic signals traveling on a computer network, said
2 electromagnetic signals carrying information to practice ~~the method of claim 1~~ of operat-
3 ing a switch for frames in a computer network, comprising:

4 receiving a frame (the received frame) at a port of said switch, said received
5 frame containing one or more indicia of frame type designation;

6 deriving a virtual local area network (derived VLAN) value in response to said
7 one or more indicia of frame type designation, said derived VLAN internal to said
8 switch;

9 accessing a forwarding data base with said derived VLAN value to determine a
10 destination address; and,

11 forwarding, in response to said derived VLAN value, said received frame to an
12 output port for transmission to the destination.

1 13. (Currently Amended) A method of operating a switch for frames in a computer net-
2 work comprising:

3 using one or more indicia of frame type designation found in ~~the a~~ received frame
4 to derive a virtual local area network (derived VLAN) value, said derived VLAN internal
5 to said switch;

6 using the derived VLAN value in making forwarding decisions.

1 14. (Original) The method of claim 13 further comprising:

2 controlling broadcast domains in the computer network by forwarding in response
3 to the derived VLAN value.

1 15. (currently Amended) The method of claim 13 further comprising:

2 using an indicia of the a receiving port in constructing the derived VLAN value.

1 16. (Currently Amended) A computer readable media containing instructions for the
2 practice of ~~the method of claim 13~~ operating a switch for frames in a computer network
3 comprising:
4 using one or more indicia of frame type designation found in the received frame
5 to derive a virtual local area network (derived VLAN) value, said derived VLAN internal
6 to said switch;
7 using the derived VLAN value in making forwarding decisions.

1 17. (Currently Amended) Electromagnetic signals traveling on a computer network, said
2 electromagnetic signals carrying information to practice ~~the method of claim 13~~ operating
3 a switch for frames in a computer network comprising:
4 using one or more indicia of frame type designation found in the received frame
5 to derive a virtual local area network (derived VLAN) value, said derived VLAN internal
6 to said switch;
7 using the derived VLAN value in making forwarding decisions.